

GEOM.

ch. 8.6

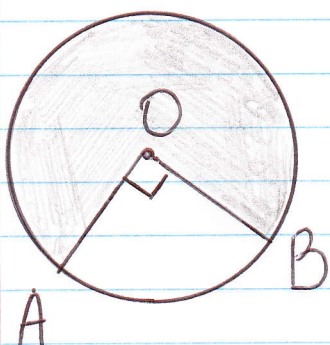
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#3

4 POINTS

GIVEN:  $R = 16 \text{ cm}$

$$m\angle AOB = 90^\circ$$



FIND  $A_\odot$  - ?

$$1. A_\odot = \pi R^2 = \pi \cdot 16^2 = 256\pi \text{ cm}^2$$

$$2. \frac{256\pi}{x} = \frac{360^\circ}{90^\circ}$$

$$\frac{360x}{360} = \frac{90 \cdot 256\pi}{360}$$

$$x = \frac{90 \cdot 256\pi}{360} = \frac{256\pi}{4} = 64\pi \text{ cm}^2$$

3. SHADED REGION AREA:

$$A_\odot = 256\pi - 64\pi = \underline{192\pi \text{ cm}^2}$$

$$\text{OR } A_\odot = 192 \cdot 3.14 \approx 603 \text{ cm}^2$$

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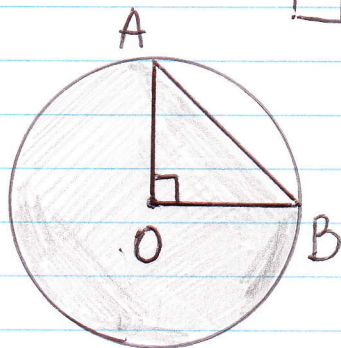
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#5

6 points

GIVEN:  $R = 8 \text{ cm}$

$m\angle AOB = 90^\circ$



FIND  $A_{\text{⊗}} - ?$

$$1. A = \pi R^2 = \pi \cdot 8^2 = 64\pi \text{ cm}^2$$

$$2. A_{\text{SECTOR AOB}} = \frac{64\pi}{4} = 16\pi \text{ cm}^2$$

$$3. A_{\triangle AOB} = \frac{b \cdot h}{2} = \frac{OB \cdot AO}{2} = \frac{8 \cdot 8}{2} = 32 \text{ cm}^2$$

$$4. A_{\text{AOB UNSHADED}} = 16\pi - 32 \text{ cm}^2$$

$$\begin{aligned} 5. A_{\text{⊗}} &= 64\pi - (16\pi - 32) = \\ &= 64\pi - 16\pi + 32 = \underline{48\pi + 32 \text{ cm}^2} \end{aligned}$$

$$\text{OR } A_{\text{⊗}} = 48 \cdot 3.14 + 32 = 183 \text{ cm}^2$$

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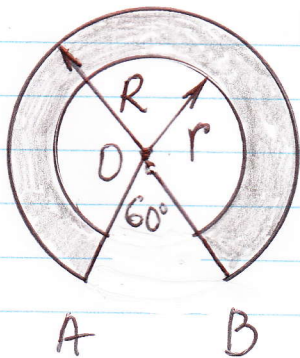
#8

6 points

GIVEN:  $R = 12 \text{ cm}$   
 $r = 9 \text{ cm}$

$m\angle AOB = 60^\circ$

FIND  $A_n$  - ?



1.  $A_R = \pi R^2 = \pi \cdot 12^2 = 144\pi \text{ cm}^2$

2.  $A_r = \pi r^2 = \pi \cdot 9^2 = 81\pi \text{ cm}^2$

3.  $A_R - A_r = 144\pi - 81\pi = 63\pi \text{ cm}^2$

4. 
$$\frac{63\pi}{x} = \frac{360^\circ}{(360^\circ - 60^\circ)}$$

$$\frac{63\pi}{x} = \frac{360^\circ}{300^\circ}; \quad 360x = 63\pi \cdot 300$$

$$x = \frac{63\pi \cdot 300}{360} = \frac{63\pi \cdot 5}{6} = \frac{105\pi}{2} \text{ cm}^2$$

$$A_n = \frac{105\pi}{2} \text{ cm}^2$$

$$\text{OR } A_n = \frac{105 \cdot 3.14}{2} = \underline{\underline{165 \text{ cm}^2}}$$